ADDITIONAL JITC VMF INITIATIVES

JITC is researching, developing, and /or implementing many new VMF-related initiatives. The following are but a few of those initiatives:

- *Development of VMF Master Test Procedures*
- *Development of MIL-STD-2045-47001 ("VMF Header") Testing Methodology*
- *Coordination of Combined (Allied) Interoperability Testing*
- *Development of VMF eXtensible Mark-Up Language (XML) Testing Methodology*
- *Establishment of a common suite of VMF test tools*

JITC Points of Contact:

VMF Testing POC
DSN 821-5400
(520) 533-5400

Tactical Data Link Branch
DSN 879-5459
(520) 538-5459

C2 Systems Branch
DSN 879-5167
(520) 538-5167

Joint Interoperability Test Command
PO BOX 12798
Fort Huachuca, AZ 85670-2798

1-800-LET-JITC
http://jitc.fhu.disa.mil

Increasing Combat Effectiveness

VARIABLE MESSAGE FORMAT (VMF) TESTING PROGRAM

Joint Interoperability Test Command

GENERAL INFORMATION

VMF is a member of the J-Series family of message formats, along with Link 16, Link 22, and the Common Message Format (CMF). VMF messages provide a common means of exchanging digital data across any interface between combat units at various organizational levels, with varying needs for volume and detail of information, and applicable to a broad range of tactical communications systems.

Per Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 6212.01C, Joint Interoperability Test Command (JITC) is the responsible organization for certifying joint interoperability of all Department of Defense (DOD) Information Technology and National Security Systems (IT and NSS) that exchange and use information to enable units/forces to operate effectively in Joint, Coalition, and interagency operations. JITC accomplishes this by conducting standards conformance and joint interoperability testing.

The diverse nature of DOD IT and NSS, each with a wide range of capabilities, presents many challenges for today's warfighter. The demand for VMF interoperability between the Services and Agencies (S/As) establishes the need for a testbed that allows for the verification of standards conformance and interoperability. To conduct this testing, JITC uses various means, including the Common Operating Environment Message Processor (CMP), VMF Test Tool (VTT), Joint VMF Link Processor (JVLP), Joint Interoperability Modular Evaluation System (JIMES), and a VMF Traceability Matrix.

Visit our World Wide Web Homepage at
http://jitc.fhu.disa.mil/tadil

COMMON OPERATING ENVIRONMENT MESSAGE PROCESSOR (CMP)

CMP can transmit/generate and receive/validate VMF messages in accordance with (IAW) Military Standard (MIL-STD) 6017, the VMF interface standard. CMP provides the capability to input, edit, validate, import /open, and generate VMF messages.

VMF TEST TOOL (VTT)

VTT, developed by the United States Army (USA) Communications-Electronics Command (CECOM) Software Engineering Center (SEC), is used to verify and validate messages for proper format against the VMF message standard and to examine the message handling capability of communication systems implementing VMF. The tool is database driven and provides support to various VMF specifications. VTT is presently the most widely used VMF test tool amongst the S/As.

JOINT VMF LINK PROCESSOR (JVLP)

JVLP, developed by JITC, parses incoming messages and performs data validation of the message structure. It displays both incoming and outgoing messages in a Tactical Data Link Data Extraction and Reduction Guide (DERG)-like, man-readable format to support analysis. The Bit Oriented Message (BOM) Editor is a companion tool to JVLP. The BOM Editor displays VMF messages based on the VMF Technical Interface Design Plan - Test Edition (TIDP-TE) Revision 4 (R4), R5, or MIL-STD-6017. It allows the user to create, edit, validate, and display VMF message files and automatically performs message format and data validation for each message generated. In addition, a user can validate any VMF message for message format, content, cases, and conditions.

VMF TRACEABILITY MATRIX

The VMF Traceability Matrix, developed by JITC, is a VMF TIDP-TE and MIL-STD-6017 message requirements database that reflects each R4, R5, and MIL-STD-6017 message and the required cases, conditions, fields, repeats, negative testing, and data element boundaries. JITC uses this tool to ensure testing requirements are met. JITC develops test messages that satisfy these testing requirements.

STEPS REQUIRED FOR CERTIFICATION

JITC, in conjunction with the Program Managers, plans and conducts standards conformance evaluation, including compliance with applicable Key Interface Profiles during the development and acquisition procurement processes. JITC

provides input to the Development Test and Operational Test Readiness Review processes on whether a system is ready for testing, from an interoperability perspective.

The following are the steps a program should take in preparation for Joint Testing and Certification:

All policy documents pertaining to joint interoperability testing and certification are on our web site at http:jitc.fhu.disa.mil/ciidocs.htm

1. *Contact your Service Participating Test Unit Coordinator (PTUC) (listed below) to coordinate Joint Testing and Certification.*
2. *Contact the appropriate JITC System POC (see Command and Control (C2) Systems Branch POC information on next page) to coordinate certification testing requirements and to ensure inclusion in the System Tracking Program. PMs should accomplish this early in program development to ensure certification is achieved to support a milestone decision.*
3. *Plan and budget for Standards Conformance and Joint Interoperability Testing during development IAW Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 6212.01C.*
4. *Include Joint Testing and Certification in Mission Needs Statements, Initial Capabilities Documents, and Test and Evaluation Master Plans (CJCSI 6212.01C).*
5. *Provide system VMF message implementations and system descriptions to JITC to support the development of test plans and procedures.*

SERVICE VMF PARTICIPATING TEST UNIT COORDINATORS

US Army-	DSN 992-8453 or 732-532-8453
US Navy-	DSN 553-8897 or 619-553-8897
US Marine Corps-	DSN 365-2412 or 760-725-2412
US Air Force-	DSN 575-3567 or 757-225-3567

INTEROPERABILITY TEST SUPPORT

JITC provides test analysis and recommendations to users as part of the unique free or fee for service option, depending on the system. In addition, all S/As have testbeds that provide the full range of VMF testing capabilities required for standards conformance and interoperability certification. JITC may be able to issue certifications based on Service testing if documentation supports a certification decision.